

EH-11046

10/775,905

REMARKS

Applicant thanks the Examiner for the attention accorded the present Application in the September 20, 2007 Non-Final Office Action, in which claims 1-2 and 5-7 were pending. By the foregoing amendments, claim 2 has been cancelled and claim 1 has been amended to more clearly specify the present invention. No new matter has been added. Based on the above amendments, Applicant respectfully submits that the rejections to these claims have been overcome. Reconsideration of this Application, and allowance of pending claims 1 and 5-7 is respectfully requested in view of the foregoing amendments and the following remarks.

35 U.S.C. § 103 rejections

Claims 1-2 and 5-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hiskes in view of Hellemann.

As presently claimed in Applicant's independent claim 1, Applicant's invention comprises "[a] method for repairing a **structurally supportive foot of a cast stator vane segment** ... comprising ...: removing a portion of a structurally supportive foot from an inner platform of a cast stator vane segment; securing a replacement structurally supportive foot section onto the cast stator vane segment by tack welding; securing the replacement structurally supportive foot section onto the cast stator vane segment using an electron beam welder; heat treating the replacement structurally supportive foot section and cast stator vane segment; and machining the replacement structurally supportive foot section to a suitable shape."

In contrast, neither of Hiskes and/or Hellemann disclose, nor even suggest, repairing any kind of structurally supportive structure as claimed by Applicant. Therefore, Hiskes and Hellemann, even if combined, are deficient as references against Applicant's invention.

Hiskes only discusses repairing outer platforms via diffusion bonding. Those skilled in the art will appreciate that the outer platform is not a robust structurally supportive attachment structure like the inner platform being repaired by Applicant's invention (which will have much more centrifugal force applied to it during operation of

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the gas turbine engine than the outer platform). Additionally, the only damage being repaired by Hiskes is damage to the airfoil itself, near where the airfoil surface meets the outer platform. One skilled in the art will appreciate that many repairs that may be performed on non-structurally supportive structures will not be able to be performed on robust structurally supportive attachment structures. As such, one skilled in the art would not look to Hiskes (which only repairs non-structurally supportive airfoil surfaces near the outer platform via diffusion bonding) to discover a solution to repairing a robust structurally supportive attachment structure like the inner platform foot being repaired by Applicant's invention. Therefore, and for the reasons cited by the Examiner, Hiskes is deficient as a reference against Applicant's invention.

Helleman fails to cure the deficiencies of Hiskes. Hellemann only discusses repairs being performed on airfoil surfaces (i.e., on the leading and trailing edges of the airfoil). There are no inner platforms in Hellemann because Hellemann only discusses blisks. As previously mentioned, the airfoils being repaired in Hellemann are not robust structurally supportive attachment structures like the inner platform foot being repaired by Applicant's invention. One skilled in the art will appreciate that many repairs that may be performed on non-structurally supportive, non-attachment structures will not be able to be performed on robust structurally supportive attachment structures. As such, one skilled in the art would not look to Helleman (which only repairs non-structurally supportive, non-attachment airfoil surfaces) to discover a solution to repairing a robust structurally supportive attachment structure like the inner platform foot being repaired by Applicant's invention. Therefore, Hellemann is also deficient as a reference against Applicant's invention.

Applicant respectfully submits that independent claim 1 of the present invention is therefore patentably distinguished from Hiskes and Hellemann. As claims 5-7 depend from claim 1, the discussion above applies to these claims as well. Further, these claims each include separate novel features. Thus, Applicant respectfully requests that the Examiner withdraw these rejections and allow pending claims 1 and 5-7.

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CONCLUSION

As this response is being timely filed within three (3) months of the mailing date of the Non-Final Office Action dated 09/20/07, Applicant believes that there are no fees due. However, if this is incorrect, the Commissioner is authorized to charge any fees that may be due to Deposit Account Number 21-0279, Order No. EH-11046.

Should the Examiner have any questions, or determine that any further action is necessary to place this Application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

Respectfully submitted,

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